

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number
WO 2005/064341 A2

(51) International Patent Classification⁷: **G01N 33/573**

(21) International Application Number:
PCT/EP2004/014814

(22) International Filing Date:
28 December 2004 (28.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03380310.7 30 December 2003 (30.12.2003) EP

(71) Applicants (*for all designated States except US*):
PROGENIKA BIOPHARMA, S.A. [ES/ES]; Parque Tecnológico de Zamudio, Ibaizabal Bidea - Edificio 801 - A 2^a planta, E-48160 DERIO - Vizcaya (ES). **UNIVERSIDAD DEL PAÍS VASCO** [ES/ES]; Rectorado, Barrio Sarriena, s/n, 48940 Leioa-Vizcaya (ES).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **ARIZ LÓPEZ DE CASTRO**, Usue [ES/ES]; Parque Tecnológico de Zamudio, Edificio 801, E-48160 DERIO - Vizcaya (ES). **OS-ABA ORTIZ DE MENDIBIL**, Lourdes [ES/ES]; Parque Tecnológico de Zamudio, Edificio 801, E-48160 DERIO - Vizcaya (ES). **JUNQUERA SÁNCHEZ-VALLEJO**, Corrina [ES/ES]; Parque Tecnológico de Zamudio, Edificio 801, E-48160 DERIO - Vizcaya (ES). **OCHOA GARAY**, Jorge [ES/ES]; Parque Tecnológico de Zamudio, Edificio 801, E-48160 DERIO - Vizcaya (ES). **ESCUDERO GARCÍA DE GALDEANO**, Pedro [ES/ES]; Parque Tecnológico de Zamudio, Edificio 801, E-48160 DERIO - Vizcaya (ES). **SANTA CRUZ**, Simon [ES/ES]; Parque Tecnológico de Zamudio, Edificio 801, E-48160 DERIO - Vizcaya (ES). **SIMÓN BUELA**, Laureano [ES/ES]; Parque Tecnológico de Zamudio, Edificio 801, E-48160 DERIO - Vizcaya (ES). **MARTÍNEZ MARTÍNEZ**, Antonio [ES/ES]; Parque Tecnológico de Zamudio, Edificio 801, E-48160 DERIO - Vizcaya (ES). **MATUTE ALMAU**, Carlos [ES/ES]; Universidad del País Vasco,

E-48940 LEIOA - Vizcaya (ES). **DOMERCQ GARCÍA**, María [ES/ES]; Universidad del País Vasco, E-48940 LEIOA - Vizcaya (ES). **ALBERDI ALFONSO**, Elena [ES/ES]; Universidad del País Vasco, E-48940 LEIOA - Vizcaya (ES). **SÁNCHEZ GÓMEZ**, María Victoria [ES/ES]; Universidad del País Vasco, E-48940 LEIOA - Vizcaya (ES). **VALLEJO ILLARRAMENDI**, Ainara [ES/ES]; Universidad del País Vasco, E-48940 LEIOA - Vizcaya (ES). **IBARRETXE BILBAO**, Gaskon [ES/ES]; Universidad del País Vasco, E-48940 LEIOA - Vizcaya (ES). **ETXEBARRIA GALNARES**, Estibaliz [ES/ES]; Universidad del País Vasco, E-48940 LEIOA - Vizcaya (ES).

(74) Agent: **ARIAS SANZ**, Juan; ABG Patentes, S.L., Orense, 68, 7th floor, E-28020 Madrid (ES).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHODS FOR THE IN VITRO DIAGNOSIS AND IN VITRO PROGNOSIS OF DEMYELINATING DISEASES, AND FOR THE DEVELOPMENT OF DRUGS AGAINST DEMYELINATING DISEASES

(57) Abstract: The present invention refers to an in vitro method for detecting the presence of demyelinating diseases in an individual, for determining the stage or severity of said diseases in the individual, or for monitoring the effect of the therapy administered to an individual suffering said diseases; to the search, identification, development and evaluation of efficacy of compounds for therapy of said diseases for the purpose of developing new drugs; as well as to agents inhibiting DUSP6 protein expression and/or activity, and/or the effects of this expression. The methods and agents of the invention are preferably applied to multiple sclerosis.

WO 2005/064341 A2